



REPLACEMENT DRAWING SHEET

Serial No. 10/004,058

Inventors: George V. Paul et al.

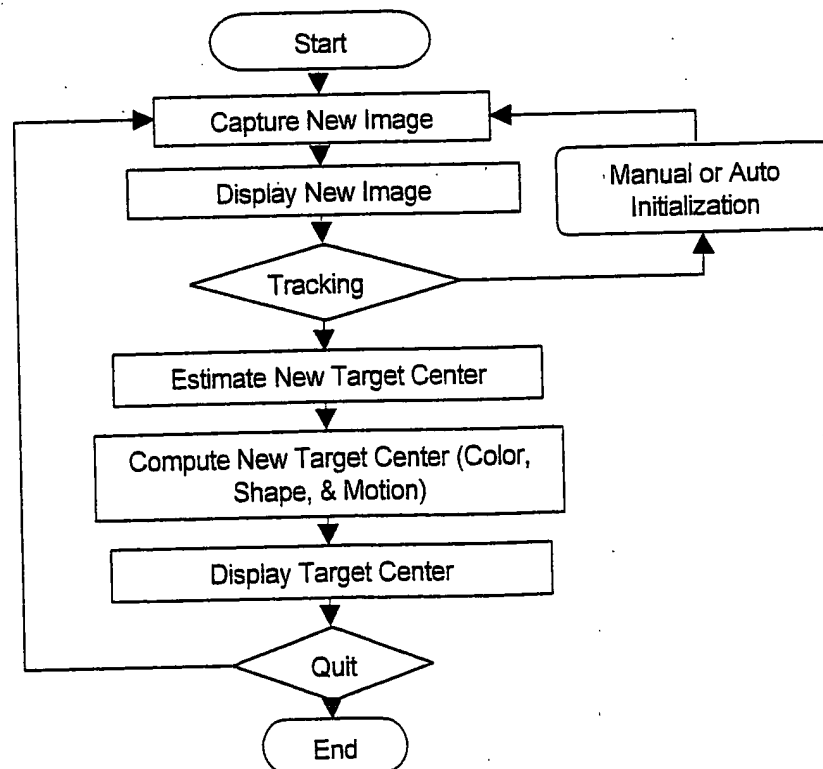
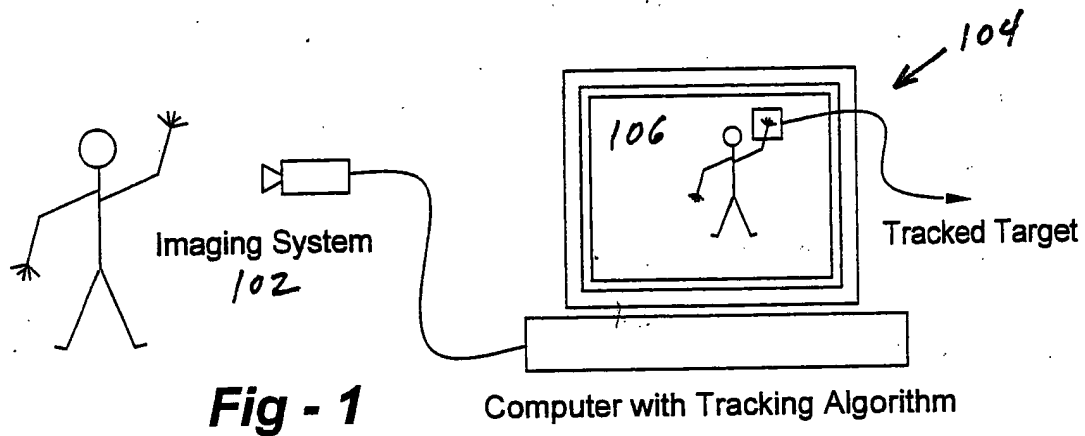


FIGURE 2



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File

Help

40

30

20

Motion Intensity Thr

Motion Count Thr

Freq 28.30 Hz Pos 106.04 155.20  
Freq 28.75 Hz Pos 111.43 158.00

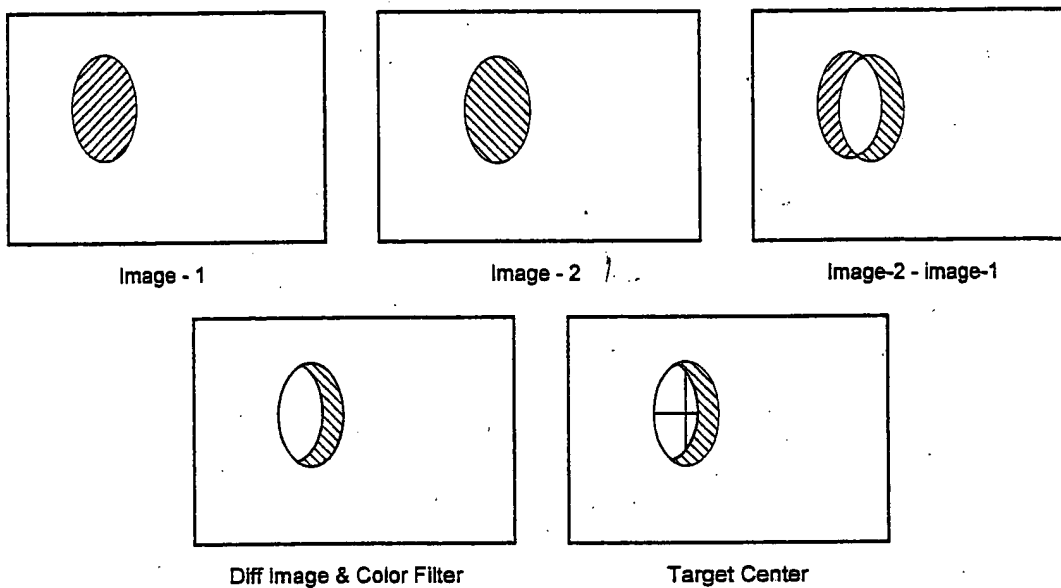
**Fig - 3**



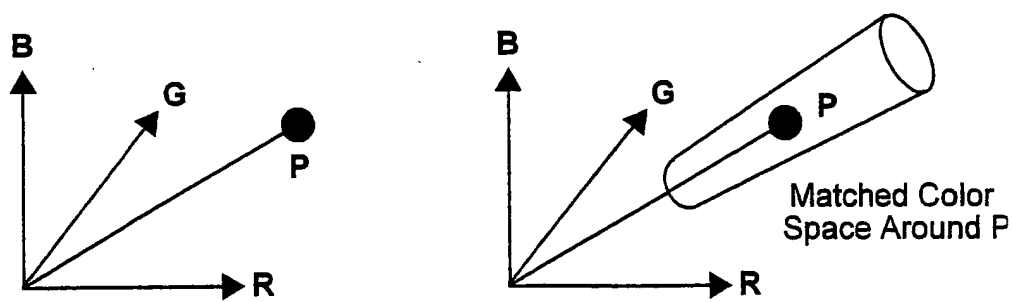
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**Fig - 4**



**Fig - 5**



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Given new image and the estimated target center as  $rc$ ,  $cc$  and old target shape  
begin

```
for  $i=rc-rs/2$  to  $i=rc+rs/2$ 
  for  $j=cc-cs/2$  to  $j=cc+cs/2$ 
     $RGB = \text{pixel}(i,j)$ 
     $c = \text{FindColorMatch}(RGB)$ 
    if  $c > 0$ 
       $cr = c*i$ 
       $cc = c*j$ 
      if this pixel lies on the previous shape template
         $sr = c*i$ 
         $sc = c*j$ 
         $s = c;$ 
      else pixel shows movement
         $mr = c*i$ 
         $mc = c*j$ 
         $m = c;$ 
      endif
      mark this pixel in the next shape template
       $Nc = Nc + c$ 
       $Ns = Ns + s$ 
       $Nm = Nm + m$ 
    else
      unmark this pixel in the next shape template
    endif
  endfor
endfor
```

```
 $cr = cr/Nc$ ,  $cc = cc/Nc$ 
 $sr = or/Ns$ ,  $sc = sc/Ns$ 
 $mr = mr/Nm$ ,  $mc = mc/Nm$ 
```

compute new target center as a weighted average

```
 $newr = cr*cr + sr*sr + mr*mr$ 
 $newc = cc*cc + sc*sc + mc*mc$ 
 $velr = (newr-rc)/t$ 
 $velc = (newc-cc)/t$ 
```

FIGURE 6



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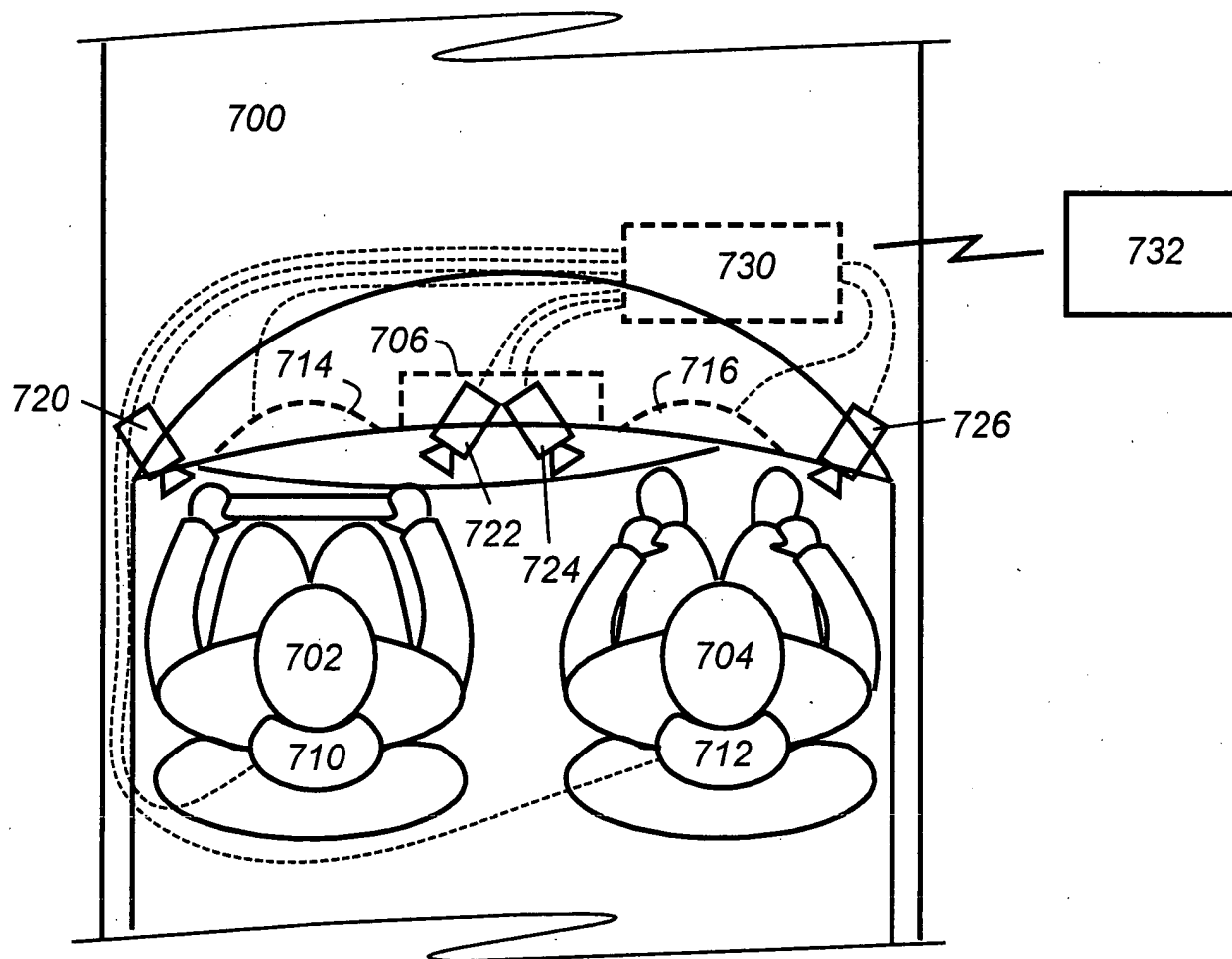


FIGURE 7